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The Therapeutic Use of Music in Critical Care

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Abstract

Music therapy is an area that is oftentimes not widely accepted in the highly technological environment of the critical care unit. This is unfortunate since music has been an integral part of healing dating back to ancient times. An extensive review of nursing research literature indicates physiological and psychological benefits to music therapy. These benefits include reductions in blood pressure, heart rate, respiratory rate, pain and anxiety, along with increases in tolerance levels for patients suffering from acute and chronic pain. The effectiveness of this intervention is dependent upon how well the individual can relate to the music selection. Music therapy promotes a holistic approach to patient care that the critical care Clinical Nurse Specialist can incorporate into the health care team through advanced practice, education, consultation, research and managerial roles. Music therapy is not to be viewed as an alternative to traditional healing modalities but as a complementary addition to standard nursing practice.

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Chapter One

Introduction to Music Therapy

In most Western societies music is a part of everyday life. It is a universal language that can break through the barriers of different cultural backgrounds, educational levels and emotional experiences. Today, music is encountered almost everywhere; it is not limited to just traditional methods of delivery such as concerts and musicals. We find it in elevators, while on the telephone waiting to speak to another individual and throughout nature with the sounds of birds singing, ocean waves breaking upon the shore and the wind whistling. This type of music can have a calming effect on people. Music can also stimulate other responses such as feelings of great emotion or memory release upon hearing a familiar selection of music. As health care providers for the critically ill, why not tap into this vast resource to aid our clients in their journey towards wellness.

This paper includes an overview of the therapeutic effects of music as an adjunctive method to current nursing practice creating a more holistic approach to the critically ill patient. Nursing literature is reviewed noting research studies that have shown the physiological and psychological benefits of music therapy for patients experiencing pain, anxiety, loss of control, sensory overload and sensory deprivation. Approaches for the application of this intervention within nursing practice are discussed, as well as the role of the Clinical Nurse Specialist implementing music therapy within the critical care environment.

Music is not a cure but a powerful medicine that can lift the human spirit, comfort the heart and inspire the soul (Lane, 1992). Music can create an environment that makes frustrating silent times more tolerable, thus decreasing long waiting periods.

The holistic approach to delivering nursing care involves all aspects of the individual: mind, body and spirit. These three are inseparable; a change in one is

a change in the others. The critical care nurse evaluates every client system interaction, including previous health care experiences, family, home, work and community. Health care goals are then chosen according to their appropriateness in meeting the needs of the whole person. Since music is such a powerful everyday experience, music therapy needs to be explored as an inexpensive, nonpainful nursing intervention that can be utilized in the critical care environment. Music is easily adapted to fit individual needs and comfort levels, without any organic damage when added or withdrawn (Memory & Bellamy, 1993).

Definition of music therapy

Music therapy is defined "as the systematic application of music to aid in the treatment of the physiological, psychological or social aspects of an illness or disability" (Cook, 1986, p.24). This intervention may use live or recorded music and include active or passive participation by the client. Passive participation is listening to music, while active

participation involves creating music either through composing, playing, or vocalizing (Cook, 1986). Unlike the spoken language music can elicit many emotional themes simultaneously, such as hope, regret, grief, rage and resignation, allowing the patients to release these feelings and express their current emotional state or need (Salmon, 1993).

The primary goal of music therapy is to achieve a physical, psychological, social or intellectual aim through the planned and controlled use of music (Fischer, 1990). The use of music in therapy is not to teach but a time of sharing with a patient at his level in a non-conventional manner. Music expresses man's deepest emotions; created by man it can serve in health and illness, happiness and sorrow as an integration of mind, body and soul (Alvin, 1978).

History of music and medicine

There is a long history of utilizing music in conjunction with medical care. In ancient times

primitive people performed their healing rituals with music. Greek philosophers used music as a therapy with the mentally disturbed (Fischer, 1990 & Magill-Levreault, 1993). In Roman times, Alexander the Great believed that music created men filled with inspiration and energy. After World War II, music was used to calm shell-shocked soldiers. The first recorded use of music in the hospital occurred in the 1800's to decrease the anxieties of surgical patients and assist as a sleep aid. Dentists became the leading advocates for music usage in the 1940's, recognizing that music could decrease client discomfort by distracting them from the sound of the drill (Lane, 1992, Cook, 1986 & Cook, 1981).

Physiology of music therapy

Explanations vary regarding the physiologic explanation of music's effects on the body. Suggested theories include the following:

1. Auditory stimulation occupies some of the neurological pathways of the brain leaving fewer

neurotransmitters to relay pain messages (Melzack & Wall, 1965).

2. Music may evoke intense emotions which in return may affect our autonomic nervous system, triggering the release of hormones and endorphins, natural opiates of the body (Standley, 1986).

3. In an environment that is invasive, unfamiliar and depersonalized, feelings of hopelessness may be decreased by giving a person control over music (Cook, 1986).

4. Music may reduce muscular tension by limiting sounds that can be unsettling (Standley, 1986).

Throughout these theories, music can be viewed as a diversional activity to be used in combination with medical care. Have you ever thought that your patients might respond better if they were more involved in their care and less bored? Diversional activity deficit is defined as "the state in which the individual experiences or is at risk for experiencing an environment that is devoid of stimulation or

interest" (Radziwicz & Schneider, 1992, p.293). This is a state of being quite familiar to most intensive care patients: a feeling of decreased motivation or ability to perform their usual leisure activities known to stimulate relaxation, thereby promoting health. This deficit can occur with prolonged hospitalization, long periods of confinement and lengthy procedures that occur frequently. Patients who use diversional activities often verbalize that the time passes more quickly and hospitalization can become more bearable (Radziwicz et al., 1992).

Holistic approach to patient care

Florence Nightingale believed that the primary focus for nursing actions was to adjust the environment, placing the human body in the best possible situation for the natural reparative processes to occur (Marriner-Tomey, 1994). Nightingale may not have had Dolby stereo surround sound in mind when she stated this, but as technology and times change there is no reason not to incorporate them into our nursing

care (Biley, 1992). Nurses are always manipulating and controlling the environment to promote healing for patients. Music provides nurses with a psychological therapy that can be combined with traditional physiologic interventions to treat the patient as a whole person (Fontaine, 1994).

Benefits of music therapy in critical care

Intensive care units are highly technologically based and this technology is extremely important for saving lives. These units are also viewed as possibly the most frightening and intimidating environments in the entire hospital. Patients and family members are exposed to many unpleasant sights (instruments and procedures) and sounds (alarms), along with a language of medical terminology which is unfamiliar to them (Evans & Rubio, 1994). Oftentimes, critical care patients are seen to suffer from a wide range of problems: an inability to communicate or sleep, pain, anxiety and, in certain situations, either sensory overload or sensory deprivation.

Many activities in an intensive care unit appear to be between the staff and the machines rather than the staff and the patient. Music therapy could serve as a bridge for this gap between staff and patient (Aldridge, Gustorff & Hannich, 1990). Music therapy can also offer a means of familiarity to patients and their families. It is an intervention that can be considered as a way to decrease feelings of isolation and help reduce anxieties, especially for those patients with tubes or medications that are preventing them from speaking (Coughlan, 1994).

Summary

Music therapy is not meant to be a cure, it is meant to create an environment where healing can take place. An environment that involves all aspects of the individual: mind, body and spirit. This holistic approach to nursing care can be of great assistance in the highly technological world of critical care nursing.

Chapter Two

Research in Music Therapy

Stress and anxiety are often experienced by individuals admitted to the hospital, producing a shift within their homeostatic balance which can present as physical and psychological distress (Caunt, 1992). As discussed in the previous chapter, music's effects upon the body have been identified for hundreds of years. Unfortunately, nursing research of this subject has been limited to the past two decades. Research has been conducted using various patient populations: myocardial infarction patients (White, 1992, Bolwerk, 1990, Guzzetta, 1989, Zimmerman, Pierson & Marker, 1988, and Davis-Rollans & Cunningham, 1987), post-operative patients (Barnason, Zimmerman & Nieveen, 1995, Heitz, Symreng & Scamman, 1992, Mullooly, Levin & Feldman, 1988 and Locsin, 1981), comatose patients (Aldridge et al., 1990) and oncology patients (Updike, 1990, Zimmerman, Pozehl, Duncan & Schmitz, 1989 and Frank, 1985). Any of these patient groups can be encountered in an intensive care unit.

Researchers have focused on the effects of music therapy physiologically (pain and hemodynamic measurements) or psychologically (anxiety levels). A review of these studies will indicate the effectiveness of music therapy and a need to incorporate it adjunctively into the treatment of all patients, including the critically ill.

Physiological Benefits

The most often cited research study conducted utilizing music therapy is Guzzetta's 1989 study involving 80 patients admitted to the Coronary Care Unit (CCU) at three different hospitals with a diagnosis of acute myocardial infarction. Patients were randomly assigned to three different groups: control group, relaxation only group and relaxation with music therapy group. The control group received routine nursing care, patients in the relaxation group were taught and practiced a relaxation technique, while the music group received both the relaxation technique and listened to a musical cassette. Therapy for both

experimental groups was twenty minutes, three times a day for two days. Patients participating in the music therapy group were allowed to choose the type of music to be played from the three available selections: soothing popular music, soothing classical music or nontraditional music, defined by Guzzetta "as compositions having no vocalization or meter, periods of silence and asymmetric rhythm" (1989, p. 611).

Results of this study indicated a significant reduction in apical heart rates when the relaxation group and music therapy group were compared to the control group especially as therapy sessions progressed. The music therapy group was found to have the most significant increase in peripheral temperatures among all three groups. This study supports the idea that relaxation and music therapy can have a profound effect on patients in a critical care environment even if their stay is limited.

In 1990, a convenience sample population of twenty patients in an intensive care unit was studied by

Updike. Patient diagnosis varied from post-myocardial infarction, sudden death syndrome, multiple trauma to cancer. Patients were allowed to choose from the eight programs of classical and contemporary music available and the session then lasted for 30 minutes.

Physiological measurements were collected before and after the music session. Although the results did reveal a significant reduction in systolic blood pressure and mean arterial pressure, the lack of an experimental design and randomization of subjects greatly restricts the interpretation of these results.

Another study conducted in 1990 by Aldridge et al. utilized music therapy with comatose patients. All the patients had been involved in some sort of accident, scored between 4 and 7 on the Glasgow coma scale and most had undergone neurosurgery. Each therapy session lasted between 8-12 minutes and this time singing was performed live. The music was based upon the tempo of the patient's pulse rate and breathing pattern. Included among patient responses were changes in

breathing patterns, which became slower and deeper, increases in movement, eye opening and head turning.

It is important to note that the music was kept at a low volume, as opposed to the normal high volume communication that is so typical when individuals compete with machine noise found within the critical care environment. Through this research we may possibly see that the effect of music might be more dependent upon rhythm, not volume.

As discussed in the earlier chapter, music can provide for distraction and facilitate relaxation; both can reduce the perception of pain. Heitz et al. (1992) studied 60 patients scheduled for either thyroid, parathyroid or breast surgery under general anesthesia. The study was limited to these types of surgery to control for the type of pain experienced and the type of anesthesia received. Patients were randomly assigned to one of the three groups: control, no music, no headphones; headphones, no music; and headphones with music. Individuals in the music group chose a

type of music from a prepared selection of instrumental pieces. Heitz et al. (1992) reported results showing that the music therapy group did show a significant increase in the length of time necessary prior to requiring analgesia upon return to the regular nursing unit. Upon comparison of all the groups with analysis of variance (ANOVA), the patients in the music therapy group perceived the Post-Anesthesia Care Unit (PACU) experience as a more pleasant experience overall. Alvin (1978) would explain this perception as the pleasure principle working powerfully through the music therapy and stimulating a memorable experience.

Mullooly et al. (1988) and Locsin (1981) conducted studies on female patients utilizing music therapy after abdominal surgery. In the Mullooly et al. (1988) study the women were randomly assigned to either a control group or a music group. There was a significant decrease in the anxiety levels of the group listening to music on the first post-operative day when compared to the control group. The second post-operative day

included a reduction in both pain and anxiety levels for the music group.

Locsin (1981) noted a significant reduction in musculo-skeletal and verbal pain reactions between the non-music group and the music group during the first 48 hours post-operatively. The groups utilizing music therapy also required fewer pain medications. It is important to recognize that Locsin's results are limited due to a small sample size and a lack of random assignment of participants.

In addition to studying the effects of music therapy on acutely ill patients, research has focused on the effectiveness of music therapy for patients with chronic pain. Thirty women diagnosed with rheumatoid arthritis for over six months participated in a music therapy study. The McGill Pain Questionnaire was used to determine individual perceived pain levels, prior to listening to music, immediately after the intervention and two hours after the termination of the music. Each person brought her favorite type of music and the

session lasted for 20 minutes. An increase in the participants' threshold for pain was identified. This increase lasted at least two hours, which was the length of the study (Schorr, 1993).

Zimmerman et al. (1989) conducted an experimental study regarding the effects of music on patients experiencing chronic cancer pain. All the participants had been experiencing pain for more than 6 months and receiving scheduled pain medications. Participants were randomly separated into a control group or a music group. Both groups received the same procedure of lying down for 30 minutes in a darkened room and were given a suggestion that relaxation would help decrease their pain. The music group also listened to a provided selection of instrumental music.

McGill Pain Questionnaires and Visual Analogue Scales were used to document pre-test and post-test results in both groups. The music group scores for the McGill Pain Questionnaire were significantly lower than the control group, except for the present pain

intensity (PPI) indicator. The PPI is a measurement of overall pain. The Visual Analogue Scale (VAS) is more sensitive to changes in pain than descriptor scales such as the PPI. Scores for the VAS were also significantly lower for the music group. Therefore, findings show that music did decrease the overall intensity of the pain experience (Zimmerman et al., 1989).

Psychological benefits

The focus of most research that has been conducted regarding the psychological effectiveness of music therapy has been on the capability of music to reduce anxiety experienced by patients. For example, White (1992) and Bolwerk (1990) studied anxiety and the myocardial infarction patient. Both studies utilized an experimental design for research conducted with 40 subjects each. Anxiety was measured according to the Spielberger State-Trait Anxiety Inventory (STAI). Both studies indicated a significant reduction in state anxiety scores when the music therapy groups were

compared to the control groups. Qualitatively, subjects suggested that the music was more relaxing than the quiet, since "the quiet gave me too much time to think..." (White, 1992, p.62).

Patients within a hospital environment often have the opportunity to experience some type of invasive or noninvasive procedure. These procedures can be perceived as a type of stressor to patients. Anxiety levels were shown to reduce for patients undergoing a flexible sigmoidoscopy while listening to music throughout the procedure. Patients who listened to self-selected music had a significant decrease in Spielberger STAI scores as well as decreases in heart rates and mean arterial pressures in comparison to the group that did not listen to music (Palakanis, DeNobile, Sweeney and Blankenship, 1994).

The research presented throughout this chapter has noted statistically significant benefits from music therapy either physiologically or psychologically. It is important to note that not all researchers within

this area have drawn the same conclusions. These other research studies have documented limitations related to design structure, sample sizes, length of music therapy sessions or unreliable data collection (Barnason et al., 1995, Evans et al., 1994, Elliot, 1994, Zimmerman et al. 1988, Davis-Rollans et al., 1987, & Moss, 1987).

Although the results of these research studies were not statistically significant, they were clinically significant. A common link was identified throughout each of the studies. That link was the fact that no harm was ever experienced by any of the clients during the use of music therapy. Clients expressed a sense of control over their care, a distraction from the hospital environment or a generalized feeling of relaxation. Participants encouraged the future continuation of music therapy in the hospital environment.

Music therapy is an area in need of further research. Larger sample sizes are needed to strengthen generalizability throughout a patient population.

There is need to increase the use of true experimental designs, where subjects are randomly assigned to control or treatment group. To be most beneficial, further research in music therapy could help establish criteria for the type of patient, the type of music and the length of the music sessions.

Summary

Music therapy has been identified throughout the literature to benefit clients physiologically and psychologically. Physiological responses to music therapy include the following: reduction in blood pressure, heart rate, respiratory rate, and increases in pain level or tolerance. Psychological benefits include decreases in anxiety levels. Subjective responses to music therapy refer to a feeling of increased well-being. Findings suggest that music therapy is not to be viewed as an alternative to traditional practice but as a complementary addition to nursing practice.

Chapter Three

Music therapy in clinical practice

In the previous chapter the research basis for music therapy was discussed. This chapter will focus primarily on the application of music therapy in nursing practice, the hows of establishing a music therapy program and the means to gain patient and family involvement. There are a number of clinical settings already utilizing music therapy: psychiatry, occupational and physical therapy, anesthesiology, obstetrics, surgery, oncology, pediatrics, neonatology, gerontology and cardiology (Memory et al., 1993 & Cook, 1986).

The most qualified individual to provide music as an intervention would be a trained music therapist. Unfortunately, in today's cost-restricted health care environment most hospitals are not staffed with a music therapist. This should not prevent the use of this important intervention. Any motivated individual aware of the powerful potential of music can incorporate its

use into many clinical situations. Nurses are particularly prepared to incorporate music therapy into their practice since assessment of the patient's overall needs is an integral part of the nursing process.

Candidates for music therapy

Trying to determine candidates who might benefit from utilizing music as a therapeutic intervention does not need to add stress to nursing personnel. The process involves three steps: determining client interest, identifying a client's music history, and assessing any contraindications to participating in music therapy.

Determining patient interest can be incorporated into the admission history or into a normal conversation with a patient. The nurse can discuss if the patient enjoys music and has ever used music as a coping mechanism to alleviate stress and to increase energy levels.

The second step of the process is to identify patients according to their music histories. This could also be incorporated into the admission history. According to Lane (1992), almost everyone falls into one of three categories of musical experience: performing, listening or eventing. Performers include those who have played an instrument, sung or been musically educated either formally or informally. Listeners are those people who listen to music through some form of media, stereo or radio. Eventers are people who support the arts and regularly attend concerts; these individuals are most often reminded of places and people from their past through the music they hear (Fischer, 1990).

The final step of the process is to note any contraindications to a client participating in a music therapy session. Patients whose epilepsy is triggered by music or who have a low tolerance for any kind of noise would not be music therapy candidates (Fischer, 1990). Adequate hearing is needed for any patient

interested in music therapy. Music therapy may also be inappropriate for individuals with severely diminished coping skills if music brings about intolerable memories or emotions (Fischer, 1990).

Although music therapy is not contraindicated in movement-impaired patients, special considerations should be taken when earphones are used to deliver the music. If earphones are left in place for long periods of time, they may become uncomfortable or cause pressure damage (Coughlan, 1994). A thorough assessment of every individual is necessary before and after each music therapy session.

Once the history is obtained, interest is established and an assessment of contraindications is completed, the nurse will be able to determine if the patient is a candidate for music therapy. Obtaining permission to initiate music therapy can take a simple inquiry, such as, "I have an idea that music therapy may help you to relax, would you like to try it?" It is important for the nurse to be open and receptive to

music therapy to be able to initiate the same response in the patient.

Types of music

Music selection is very dependent upon personal preference and should be accomplished daily as individual needs change. Music has a powerful effect on mood; it can be arranged to create a sense of peace and order that can restore, soothe and energize (Magill-Levreault, 1993). A selection for one individual creates images of peace and harmony, while another individual may experience sadness, anger and pain.

Songs can be linked to people and places in the past or present. Terminally ill patients often experience a need to put their life in order during their final stages of life, and music can assist the patient through a life-review process. The aim is always to promote comfort, healing and a decreased awareness of pain.

Whipple and Glynn (1992) noted that both soothing and stimulating music had a positive effect upon pain detection and pain tolerance thresholds in ten healthy female volunteers. However, stimulating music was more effective at distracting than soothing music, since it also raised tactile thresholds. This may help to explain why most patients seem to prefer fast, lively music for brief episodes of acute pain (McCaffery, 1992).

Mornhinweg (1992) conducted a quasi-experimental study to identify music preference and determine if music selections have an effect on perceived stress levels. Two convenience groups of undergraduate nursing students were selected. Significant results reported that listening to classical or New Age music was more appropriate to effect relaxation than listening to popular music. This was contrary to most assumptions that people relax to familiar music, since the group was not familiar with New Age music.

Neither of the aforementioned studies utilized a true experimental design and both were limited to healthy subjects. Therefore, it is not possible to generalize these results regarding the ultimate type of music to be used in a therapy session.

The most important factor to remember while utilizing music therapy as a nursing intervention is to allow the patients to express themselves. They should be given the opportunity to choose their own music.

"The type of music judged soothing and relaxing by one person may be unpleasant and annoying to another"

(Guzzetta, 1989, p.611). Even heavy metal music can be used in sessions if it is the patient's preference (Wooten, 1992).

Family members can be involved in the music selection process, especially for those patients who are unable to make their own selections due to their illness. The nurse could ask the family about the patients pre-hospitalization musical preferences. This can help to ensure that music does not become

monotonous for these individuals and encourages family participation in patient care.

Cost

Cost will vary according to the amount of equipment that will be necessary to purchase. Portable cassette players that can be used with or without earphones are the most practical, allowing music to be shared with friends and family members or listened to in private. Also, a wide variety of music is important to maintain a therapeutic tape library since individual musical preferences vary.

Funding is a particularly difficult situation with health care resources constantly being cut. If normal resource management channels do not promote the purchase of equipment to establish a music therapy program, alternative methods may become necessary. Funds may be donated from volunteer organizations to purchase the equipment, local music or electronic stores might be willing to donate tapes, cassette players and accessories needed.

Staff interested in the project may volunteer to record homemade tapes. Sample tapes should include the following types of music: classical, country-western, rock, jazz, modern, religious, rhythm and blues, popular and folk. These are only suggestions and not limitations. The effectiveness of the intervention is dependent upon how well the individual can relate to the music. Also, family members could be encouraged to bring favorite music selections from home for use during the patient's hospital stay.

Sample music therapy session

The following is a suggested list of activities to facilitate planning music therapy sessions in a critical care unit:

1. The patient and the nursing staff will determine the most appropriate time for the music therapy sessions to take place. The patient must be given uninterrupted time for the intervention to be most effective.

2. The patient selects music suited to meet individual needs: to aid in relaxation, pain control, decrease anxiety, perform a life process review or as a distraction technique.

3. Battery-operated cassette players are utilized to decrease clutter in areas with limited space.

4. The patient uses earphones to listen to the music, except when sharing music with friends or family members. Earphones allow for the best reception of the music.

5. The patient should adjust the volume according to personal needs; louder volumes can be associated with increased pain. The nurse should instruct the patient of the possibility of hearing damage if music is played too loud.

6. The nurse and the patient should determine effectiveness of the music at the end of each session. This is imperative to facilitate future use of music therapy. The method of evaluation is dependent upon each individual's goals.

Summary

The application of music therapy into clinical practice involves a three-step process: determine client interest, identify the client's music history, and assess any contraindications. Findings suggest that music selection is dependent upon individual patient goals and that each patient should choose the type of music he prefers for a therapy session. Thus, a wide variety of music is needed to maintain an adequate music library. This may lead to funding difficulties that may arise when establishing a music therapy program. Donations from volunteer organizations, local music or electronic stores may be possible methods to obtain equipment and tapes, if conventional methods fail.

Chapter Four

Implications for the Critical Care

Clinical Nurse Specialist

The Critical Care Clinical Nurse Specialist (CNS) has a multidimensional role, that can be addressed according to responsibilities, competencies, or defining characteristics. This chapter will examine the implications for advanced nursing practice in the use of music therapy from the perspective of the five subroles of the CNS as delineated by the American Association of Critical-Care Nurses (1989): advanced practitioner, educator, consultant, researcher, and manager.

Advanced Practitioner

As an advanced practitioner, the critical care CNS takes a comprehensive approach to nursing practice by improving patient care outcomes through the development and maintenance of a competent health care team (AACN, 1989). The CNS views the client as a holistic being, never separating body, mind and spirit throughout the

nursing process. Health care goals and clinical decision-making are based on the needs of the total patient.

The CNS understands that the goal of nursing practice is to put the client in the best possible condition for the healing process to take place. Adjunctive therapies, such as music therapy, are recognized by the CNS as extensions of the healing modalities and not replacements for traditional medicine. These complementary therapies assist in allowing the patient to achieve a sense of well-being when conventional methods may not be totally adequate to promote a healing environment. Participation in direct patient care allows the CNS to explore adjunctive therapies of care with patients and their family members.

Due to the rapid pace of the critical care environment, the CNS may be the first to identify those patients who may benefit from music therapy. In the advanced practitioner role, the CNS has an obligation to explore all types of interventions that will enable

clients to gain a sense of control over their care. As stated in a previous chapter, music therapy has been noted to help individuals relax and gain some control over their anxiety, pain and environment.

As an advanced practitioner, the CNS must be prepared to address the concerns of skeptical health care professionals regarding the use of adjunctive therapies such as music. The CNS should have a basic understanding of the principles of action, understand arguments for and against music therapy and be able to discuss them in familiar terms with patients, family members and other staff members.

Volunteering to precept undergraduate and graduate students is another way for the advanced practitioner to bring music therapy into the clinical setting.

Critical care units are known to be fast-paced, highly demanding environments with the sickest patients. This can place great stress on staff members and may interfere with their job performance. The CNS could implement music therapy as a way to reduce the

potential for staff and personal burnout. A music therapy session conducted for fifteen to thirty minutes during a shift, or at the end, may help to relax staff and reduce stress. The nurse who can maintain a sense of focus is better attuned to the holistic needs of the patient and better able to communicate compassion and a desire to help.

Educator

Education is a traditional role for the advanced practice nurse. The CNS extends this to clients, families, nursing students, colleagues and other health care providers (AACN, 1989). The CNS serves as a resource person, preceptor and role model to fellow staff members.

When the CNS is involved in direct patient care, this time may be used to assess and correct patient and staff knowledge deficits regarding the therapeutic effects of music. The CNS may want to design patient and staff education pamphlets explaining music therapy. The distribution of literature can elicit an

opportunity to teach and reinforce music therapy as a useful nursing intervention.

There are three major populations in the hospital that the CNS would want to educate regarding music therapy effectiveness: nursing staff, physicians, and the community. The CNS could develop continuing education programs to acquaint nursing staff members with the research basis for music therapy sessions and clinical applications for its use.

CNS attendance at grand rounds and medical staff meetings could establish an avenue to acquaint physicians with the principles behind music therapy. Additionally, this would give the opportunity for the CNS to identify patients currently hospitalized that might benefit from music therapy and discuss the rationale for their selection.

Finally, a method for the CNS to educate the community on the therapeutic use of music is through a health promotion campaign .

As a member of a nursing faculty, the CNS would have the opportunity to integrate music therapy into

the curriculum through a discussion of nursing concepts regarding the environment. This would educate students and fellow faculty members about the professional and personal benefits of music therapy. This allows the CNS to contribute to the further development of theoretical concepts and acceptance with regard to music therapy.

Consultant

The role of CNS as a consultant is to introduce new information, skills and research developments in the clinical setting to help keep staff members abreast of changes in nursing practice. The goal of a consultant is to facilitate client-centered problem solving and have a positive impact on patient care outcomes. The client may be patient, family, colleague or fellow health care provider (Walsh, 1994).

The use of music as a nursing intervention in the treatment of patients experiencing anxiety and pain is an established outcome standard for nursing care of the critically ill (AACN, 1990). The CNS may be called

upon as a consultant to collaborate in the development of policy guidelines and Quality Assurance standards for hospital music therapy programs. Expert knowledge places this individual in a prime position to influence organizational acceptance and support for the use of music therapy.

The critical care CNS with expertise in the use of music therapy may be consulted to conduct sessions for patients on other nursing units outside of the critical care unit. Also, fellow nursing colleagues, other health care providers and community members may request assistance to start their own individual music therapy programs at home.

Researcher

The role of the critical care CNS as a researcher is to expand the scientific base of nursing practice in critical care by utilizing, facilitating and conducting nursing research (AACN, 1989). As discussed in a previous chapter, research is still rather limited in the area of music therapy. The CNS has the

responsibility to make significant contributions to a growing body of knowledge to enhance the clinical practice of music therapy for critically ill patients.

Establishing a journal club will deepen novice and expert staff members', understanding of the principles of nursing research and its impact on clinical practice. The CNS is then in the ideal position to identify practice issues, through personal observations or those reported by other staff members, that could be pursued in future nursing research.

All staff members should be encouraged to participate in the research process. The experience level of the CNS and staff members will determine whether the process will include the participation as data collectors for other researchers, the replication of existing research studies or the initiation of new research studies.

Some recommendations for future research in the area of music therapy by the critical care CNS include:

1. The psychological effects of music therapy on family members of patients in the critical care unit.

2. The effectiveness of music therapy to reduce burnout in staff members working in a critical care unit.

3. The effectiveness of music therapy to decrease anxiety in the patient being weaned from a ventilator.

4. The physiological and psychological responses of transplant patients to music therapy.

5. The physiological and psychological responses of renal dialysis patients to music therapy.

6. The physiological and psychological responses of trauma patients to music therapy.

7. The physiological and psychological responses of burn patients to music therapy.

Manager

As a manager, the critical care CNS participates in the design and implementation of clinical services (AACN, 1989). This allows the CNS to integrate leadership and practice together.

The CNS in the managerial position can support the implementation of music therapy into clinical practice.

Acting as a change agent, the CNS can create a climate where nontraditional treatment modalities are as much the norm as traditional methods. This environment would foster and encourage the practice of adjunctive methods of healing.

The CNS manager can ensure that standards of practice are established and Quality Assurance monitoring tools are developed to guide in the implementation of music therapy practice.

As a manager, the critical care CNS can assist with budgetary policy to establish music therapy programs. To document cost-effectiveness of these programs, the CNS manager could track the length of patient stays in the critical care unit or decreases in medications needed for pain control and sedation. This may establish a reduction in monetary expenses with the use of music therapy.

Summary

The role of the critical care Clinical Nurse Specialist is multidimensional in the process of

implementing music therapy within the critical care practice. Each individual critical care CNS must define a personal philosophy on the use of adjunctive therapies to direct clinical care. It is important that the CNS be open to all treatment modalities that promote healing. The suggestions included within this chapter are not meant to limit the critical care CNS in relation to the use of music therapy but to enhance CNS practice.

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